AMENDMENTS TO THE CLAIMS:

Kindly amend claims 1, 13, 20 and 27, as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

Claim 1 (currently amended): A data transfer system for transferring control information from a control terminal to a target through a data transmission network including at least one data transmission equipment working in a predetermined communication protocol, wherein each of said at least one data transmission equipment comprises: a receiving section for receiving a transmission signal including control information from upstream; a transmitting section for transmitting [[a]] the transmission signal including control information to downstream; and a forwarding section for forwarding control information included in ~~a~~ ~~received~~ the transmission signal to the transmitting section without controlling the control information according to the predetermined communication protocol.

Claim 2 (original): The data transfer system according to claim 1, wherein the forwarding section comprises: a data extractor for extracting the control information from the received transmission signal; and a data inserter for inserting the extracted control information into a predetermined one of a first location and a second location of the transmission signal to be transmitted.

Claim 3 (original): The data transfer system according to claim 2, wherein the first location is data communication channel (DCC) bytes of the transmission signal and the second location is DCC transmit bytes that are previously determined in the transmission signal.

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Claim 4 (original): The data transfer system according to claim 3, wherein the data extractor extracts the control information from the first location of the received transmission signal; and the data inserter inserts the extracted control information into the second location.

Claim 5 (original): The data transfer system according to claim 3, wherein the data extractor extracts the control information from the second location of the received transmission signal; and the data inserter inserts the extracted control information into the second location.

Claim 6 (original): The data transfer system according to claim 3, wherein the data extractor extracts the control information from the second location of the received transmission signal; and the data inserter inserts the extracted control information into the first location.

Claim 7 (original): The data transfer system according to claim 1, wherein the forwarding section further comprises: a data extractor for extracting the control information from the received transmission signal; a first data inserter for inserting the extracted control information into a first location of the transmission signal to be transmitted; a second data inserter for inserting the extracted control information into a second location of the transmission signal to be transmitted; and a switch for forwarding the extracted control information to a selected one of the first and second data inserters depending on predetermined control information.

Claim 8 (original): The data transfer system according to claim 4, wherein an upstream data transmission equipment works in a different communication protocol and a downstream data transmission equipment works in the predetermined communication protocol.

Claim 9 (original): The data transfer system according to claim 5, wherein both an upstream data transmission equipment and a downstream data transmission equipment work in the predetermined communication protocol.

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Claim 10 (original): The data transfer system according to claim 6, wherein an upstream data transmission equipment works in the predetermined communication protocol and a downstream data transmission equipment works in a different communication protocol.

Claim 11 (original): The data transfer system according to claim 1, wherein the data transmission network is composed of data transmission equipments working in the predetermined communication protocol.

Claim 12. (original): The data transfer system according to claim 3, wherein bytes that are not used in the transmission signal are assigned to the DCC transmit bytes.

Claim 13 (currently amended): A data transmission apparatus in a data transfer system for transferring control information from a control terminal to a target through a data transmission network, wherein the data transmission apparatus works in a predetermined communication protocol, comprising: a receiving section for receiving a transmission signal including control information from upstream; a transmitting section for transmitting [[a]] the transmission signal including control information to downstream; and a forwarding section for forwarding control information included in ~~a received~~ the transmission signal to the transmitting section without controlling the control information according to the predetermined communication protocol.

Claim 14 (original): The data transmission apparatus according to claim 13, wherein the forwarding section comprises: a data extractor for extracting the control information from the received transmission signal; and a data inserter for inserting the extracted control information into a predetermined one of a first location and a second location of the transmission signal to be transmitted.

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Claim 15 (original): The data transmission apparatus according to claim 14, wherein the first location is data communication channel (DCC) bytes of the transmission signal and the second location is DCC transmit bytes that are previously determined in the transmission signal.

Claim 16 **(original):** The data transmission apparatus according to claim 15, wherein the data extractor extracts the control information from the first location of the received transmission signal; and the data inserter inserts the extracted control information into the second location.

Claim 17 (original): The data transmission apparatus according to claim 15, wherein the data extractor extracts the control information from the second location of the received transmission signal; and the data inserter inserts the extracted control information into the second location.

Claim 18 (original): The data transmission apparatus according to claim 15, wherein the data extractor extracts the control information from the second location of the received transmission signal; and the data inserter inserts the extracted control information into the first location.

Claim 19 (original): The data transmission apparatus according to claim 13, wherein the forwarding section further comprises: a data extractor for extracting the control information from the received transmission signal; a first data inserter for inserting the extracted control information into a first location of the transmission signal to be transmitted; a second data inserter for inserting the extracted control information into a second location of the transmission signal to be transmitted; and a switch for forwarding the extracted control information to a selected one of the first and second data inserters depending on predetermined control information.

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Claim 20 (currently amended): A data transfer method for transferring control information from a control terminal to a target through a data transmission network including at least one data transmission equipment working in a predetermined communication protocol, comprising: at each of said at least one data transmission equipment, a) receiving a transmission signal including control information at a receiving section from upstream; b) forwarding control information included in ~~a received~~ the transmission signal to a transmitting section without controlling the control information according to the predetermined communication protocol; and c) transmitting [[a]] the transmission signal including the control information from the transmitting section to downstream.

Claim 21. (original): The data transfer method according to claim 20, wherein the step b) comprises: b.1) extracting the control information from the received transmission signal; and b.2) inserting the extracted control information into a predetermined one of a first location and a second location of the transmission signal to be transmitted.

Claim 22. (original): The data transfer method according to claim 21, wherein the first location is data communication channel (DCC) bytes of the transmission signal and the second location is DCC transmit bytes that are previously determined in the transmission signal.

Claim 23 (original): The data transfer method according to claim 22, wherein in the step b.1), the control information is extracted from the first location of the received transmission signal; and in the step b.2), the extracted control information is inserted into the second location.

Claim 24 (original): The data transfer method according to claim 22, wherein in the step b.1), the control information is extracted from the second location of the received

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transmission signal; and in the step b.2), the extracted control information is inserted into the second location.

Claim 25 (original): The data transfer method according to claim 22, wherein in the step b.1), the control information is extracted from the second location of the received transmission signal; and in the step b.2), the extracted control information is inserted into the first location.

Claim 26 (original): The data transfer method according to claim 22, wherein bytes that are not used in the transmission signal are assigned to the DCC transmit bytes.

Claim 27. (currently amended): A program instructing a computer of a data transmission equipment to forward control information, wherein the data transmission equipment works in a predetermined communication protocol, comprising the steps of: a) receiving a transmission signal including control information at a receiving section from upstream; b) forwarding control information included in ~~a received~~ the transmission signal to a transmitting section without controlling the control information according to the predetermined communication protocol; and c) transmitting [[a]] the transmission signal including the control information from the transmitting section to downstream.

Claim 28 (original): The program according to claim 27, wherein the step b) comprises: b.1) extracting the control information from the received transmission signal; and b.2) inserting the extracted control information into a predetermined one of a first location and a second location of the transmission signal to be transmitted.

Claim 29 (original): The program according to claim 28, wherein the first location is data communication channel (DCC) bytes of the transmission signal and the second location is DCC transmit bytes that are previously determined in the transmission signal.

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